



June 17, 2015

Mr. Jan Utrecht
Director, Environmental Health and Safety
University of Cincinnati
Two Edwards Center, Room 2310
Cincinnati, OH 45221-0218

RE: Post PCB Remediation Surface Sampling Results, Scioto Hall, University of Cincinnati,
Cincinnati, Ohio (EH&E 19965)

Dear Mr. Utrecht:

Environmental Health & Engineering, Inc. (EH&E) provides the results of surface sampling to the University of Cincinnati (UC), following polychlorinated biphenyl (PCB) abatement and encapsulation activities in Scioto Hall on the UC campus located at 2921 Scioto Lane in Cincinnati, Ohio. The objective of the surface (wipe) sampling was to evaluate the effectiveness of the encapsulant applied to the identified PCB-containing caulk and concrete building materials. This was accomplished by measuring the concentrations of PCBs on top of the encapsulated surfaces. Samples were collected according to the sampling and the quality assurance requirements specified by the U.S. Environmental Protection Agency (EPA).¹ Specifically these sampling results address General Condition 12(b)(i).²

PCB SAMPLING OF ENCAPSULATED SURFACES

Following the completion of the abatement and encapsulation of identified PCB-containing caulk and concrete building materials wipe sampling was conducted on June 4, 2015, to evaluate the effectiveness of the PCB mitigation process. EH&E conducted random wipe sampling in 20 locations on encapsulated surfaces.

¹ U.S. Environmental Protection Agency approval letter dated February 17, 2015, for risk-based polychlorinated biphenyl (PCB) cleanup and disposal at Scioto Hall, University of Cincinnati.

² 12 (b) Following encapsulation of adjacent porous surfaces, post-encapsulation sampling shall be conducted as described in the February 22, 2012 Air and Surface Sampling Plan for Morgens Hall to determine the effectiveness of the encapsulation. i) Wipe sampling of encapsulated surfaces shall be performed on a surface area basis by the standard wipe test as specified in 40 CFR § 761.123 (i.e., $\mu\text{g}/100\text{ cm}^2$).

WIPE SAMPLING METHODS

Wipe samples were collected from the exposed surfaces of the applied epoxy sealant. Each wipe sample was obtained using a hexane moistened gauze pad and collected from a nominal area of 100 square centimeters.³ The samples were analyzed by ALS Environmental (Cincinnati, Ohio) following EPA Method 8082 of SW-846. The minimum laboratory reporting limit was 1 microgram per 100 square centimeters ($\mu\text{g}/100\text{ cm}^2$). EH&E submitted one field blank, one media blank, and two replicate samples for quality control and quality assurance purposes.

ACCEPTANCE CRITERIA

The wipe sample acceptance criterion established for this project is less than or equal to $1\text{ }\mu\text{g}/100\text{ cm}^2$ for total PCBs. If the surface wipes are reported with PCBs less than $1\text{ }\mu\text{g}/100\text{ cm}^2$, the coating application and containment methods used are considered effective and complete; if the samples are reported with PCBs greater than $1\text{ }\mu\text{g}/100\text{ cm}^2$, additional cleaning and another layer of epoxy coating will be applied over all the areas represented by those samples and the sampling process will be repeated for those surfaces failing the acceptance criteria.

In the event that the sampling results are greater than the specified acceptance criteria, additional abatement procedures are required. Following the additional abatement procedures, confirmatory sampling of the re-abated areas and/or surfaces needs to be conducted. Additional abatement procedures include, but are not limited to, additional cleaning of surfaces with solvents and reapplication of sealants.

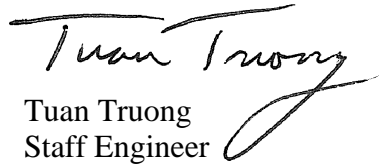
SAMPLE RESULTS


Surface sampling results provided in Table B.1 indicate that PCBs were not detected above the detection limit of $1\text{ }\mu\text{g}/100\text{ cm}^2$ in any of the surfaces sampled on June 4, 2015. PCBs were also not detected above the detection limit of $1\text{ }\mu\text{g}/100\text{ cm}^2$ in any of the quality assurance samples collected. All sample results meet the surface criteria established by EPA of $1\text{ }\mu\text{g}/100\text{ cm}^2$. These results indicate that encapsulation and containment methods used during the abatement have been effective.

³ Therefore, wipe sampling results are reported in micrograms of total PCBs per 100 cm^2 .

If you have any comments or questions regarding this report, please do not hesitate to contact either of us at 1-800-TALK EHE (1-800-825-5343).

Sincerely,


Tuan Truong
Staff Engineer


Matt A. Fragala, M.S., C.I.H.
Senior Scientist / Project Manager

Appendix A Limitations
Appendix B Sample Results
Appendix C Laboratory Report

cc: John F. Schnieder, Project Manager, University of Cincinnati

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APPENDIX A LIMITATIONS

1. Environmental Health & Engineering, Inc.'s (EH&E) indoor environmental quality assessment described in the attached report number 19965, *Post PCB Remediation Surface Sampling Results, Scioto Hall, University of Cincinnati, Cincinnati, Ohio* (hereafter "the Report"), was performed in accordance with generally accepted practices employed by other consultants undertaking similar studies at the same time and in the same geographical area; and EH&E observed that degree of care and skill generally exercised by such other consultants under similar circumstances and conditions. The observations described in the Report were made under the conditions stated therein. The conclusions presented in the Report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services.
2. Observations were made of the site as indicated within the Report. Where access to portions of the site was unavailable or limited, EH&E renders no opinion as to the condition of that portion of the site.
3. The observations and recommendations contained in the Report are based on limited environmental sampling and visual observation and were arrived at in accordance with generally accepted standards of industrial hygiene practice. The sampling and observations conducted at the site were limited in scope and, therefore, cannot be considered representative of areas not sampled or observed.
4. When an outside laboratory conducted sample analyses, EH&E relied upon the data provided and did not conduct an independent evaluation of the reliability of these data.
5. The purpose of the Report was to assess the characteristics of the subject site as stated within the Report. No specific attempt was made to verify compliance by any party with all federal, state, or local laws and regulations.

APPENDIX B SAMPLE RESULTS

Table B.1 Wipe Sample Results for Polychlorinated Biphenyls from University of Cincinnati, Scioto Hall, 2921 Scioto Lane, Cincinnati, Ohio, June 4, 2015

Sample ID	Description	Total PCB Concentration ^{1,2} (µg/100cm ²)
159216	12 th Floor, Northwest Corner, Second Column, Side	BRL <1.0
159217	12 th Floor, East Side, Fifth Column, Floor	BRL <1.0
159218	11 th Floor, Southeast Corner, Second Column, Side	BRL <1.0
159219	Replicate 159218	BRL <1.0
159220	11 th Floor, Southwest Corner, Second Column, Floor	BRL <1.0
159221	10 th Floor, Northeast Corner, Fourth Column, Side	BRL <1.0
159222	10 th Floor, West Side, Fifth Column, Side	BRL <1.0
159223	9 th Floor, Northeast Corner, Third Column, Side	BRL <1.0
159224	9 th Floor, Northwest Corner, Second Column, Floor	BRL <1.0
159225	8 th Floor, Southwest Corner, Second Column, Side	BRL <1.0
159226	8 th Floor, Southeast Corner, Second Column, Side	BRL <1.0
159227	Field blank	BRL <1.0
159228	Media blank	BRL <1.0
159229	7 th Floor, West Side, Fifth Column, Floor	BRL <1.0
159230	7 th Floor, West Side, Fifth Column, Side	BRL <1.0
159231	5 th Floor, East Side, Fifth Column, Side	BRL <1.0
159232	5 th Floor, East Side, Fifth Column, Floor	BRL <1.0
159233	4 th Floor, Northwest Corner, Second Column, Side	BRL <1.0
159234	4 th Floor, Northwest Corner, Second Column, Floor	BRL <1.0
159235	3 rd Floor, Northeast Corner, Second Column, Side	BRL <1.0
159236	Replicate 159235	BRL <1.0
159237	3 rd Floor, Northeast Corner, Second Column, Floor	BRL <1.0
159238	2 nd Floor, East Side, Fifth Column, Floor	BRL <1.0
159239	1 st Floor, Southwest Corner, Second Column, Floor	BRL <1.0
<p>PCB polychlorinated biphenyl µg/100cm² microgram per 100 square centimeters BRL below reporting limit < less than</p> <p>¹ PCB concentration analysis performed by ALS Environmental (Cincinnati, Ohio), using U.S. Environmental Protection Agency (EPA) Method 8082 (GC/ECD). ² Aroclor 1016, 1221, 1232, 1242, 1248, 1254, and 1260 tested. All results below reporting levels, unless noted.</p>		

APPENDIX C
LABORATORY REPORT



12-Jun-2015

Matt Fragala
Environmental Health and Engineering, Inc.
117 Fourth Ave.
Needham, MA 02494-2725

Tel: (617) 594-2287
Fax: (781) 247-4305

Re: 19965

Work Order: **1506177**

Dear Matt,

ALS Environmental received 24 samples on 05-Jun-2015 09:23 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 31.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Rob Nieman

Electronically approved by: Chris Gibson

Rob Nieman
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, Ohio 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: Environmental Health and Engineering, Inc.
Project: 19965
Work Order: 1506177

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1506177-01	159216	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-02	159217	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-03	159218	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-04	159219	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-05	159220	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-06	159221	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-07	159222	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-08	159223	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-09	159224	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-10	159225	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-11	159226	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-12	159227	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-13	159228	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-14	159229	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-15	159230	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-16	159231	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-17	159232	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-18	159233	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-19	159234	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-20	159235	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-21	159236	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-22	159237	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-23	159238	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>
1506177-24	159239	Wipe		6/4/2015	6/5/2015 09:23	<input type="checkbox"/>

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.

Project: 19965

Work Order: 1506177

Case Narrative

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159216
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-01
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 17:18		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159217
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-02
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 17:33		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159218
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-03
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 17:48		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159219
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-04
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 18:03		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159220
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-05
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 18:18		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159221
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-06
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 18:34		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159222
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-07
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 18:49		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159223
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-08
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 19:04		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159224
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-09
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 19:34		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159225
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-10
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 19:49		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159226
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-11
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 20:04		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159227
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-12
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area	0 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 20:19		Reporting Limit			
	µg/sample	µg/sample		ug/100cm2	
Aroclor 1016	ND	1.0		NA	
Aroclor 1221	ND	1.0		NA	
Aroclor 1232	ND	1.0		NA	
Aroclor 1242	ND	1.0		NA	
Aroclor 1248	ND	1.0		NA	
Aroclor 1254	ND	1.0		NA	
Aroclor 1260	ND	1.0		NA	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159228
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-13
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area	0 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 20:35		Reporting Limit			
	µg/sample	µg/sample		ug/100cm2	
Aroclor 1016	ND	1.0		NA	
Aroclor 1221	ND	1.0		NA	
Aroclor 1232	ND	1.0		NA	
Aroclor 1242	ND	1.0		NA	
Aroclor 1248	ND	1.0		NA	
Aroclor 1254	ND	1.0		NA	
Aroclor 1260	ND	1.0		NA	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159229
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-14
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 20:50		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159230
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-15
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 21:05		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159231
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-16
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 21:20		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159232
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-17
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 21:50		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159233
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-18
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 22:06		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159234
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-19
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 22:21		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159235
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-20
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 22:36		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159236
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-21
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 22:51		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159237
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-22
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 23:06		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159238
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-23
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 23:21		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
Sample ID: 159239
Collection Date: 6/4/2015

Work Order: 1506177
Lab ID: 1506177-24
Matrix: WIPE

Analytical Results

Analyses

PCBS WIPE		Method: SW8082	Area 100 cm2	Analyst: SAD
Date Analyzed: 6/9/2015 23:36		Reporting Limit		
	µg/sample	µg/sample	ug/100cm2	
Aroclor 1016	ND	1.0	<1.0	
Aroclor 1221	ND	1.0	<1.0	
Aroclor 1232	ND	1.0	<1.0	
Aroclor 1242	ND	1.0	<1.0	
Aroclor 1248	ND	1.0	<1.0	
Aroclor 1254	ND	1.0	<1.0	
Aroclor 1260	ND	1.0	<1.0	

Note:

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Work Order: 1506177
Project: 19965

QC BATCH REPORT

Batch ID: **28766** Instrument ID **GC3** Method: **SW8082**

MBLK		Sample ID: MBLK-28766-28766			Units: µg/sample		Analysis Date: 6/8/2015			
Client ID:		Run ID: GC3_150608A			SeqNo: 1068892		Prep Date: 6/8/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	1.0								
Aroclor 1221	ND	1.0								
Aroclor 1232	ND	1.0								
Aroclor 1242	ND	1.0								
Aroclor 1248	ND	1.0								
Aroclor 1254	ND	1.0								
Aroclor 1260	ND	1.0								
Surr: Decachlorobiphenyl	0.355	0	0.5	0	71	52.7-131	0			
Surr: Tetrachloro-m-xylene	0.449	0	0.5	0	89.8	62.4-115	0			

LCS		Sample ID: LCS-28766-28766			Units: µg/sample		Analysis Date: 6/8/2015			
Client ID:		Run ID: GC3_150608A			SeqNo: 1068893		Prep Date: 6/8/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	8.502	1.0	10	0	85	67.5-137	0			
Surr: Decachlorobiphenyl	0.353	0	0.5	0	70.6	52.7-131	0			
Surr: Tetrachloro-m-xylene	0.47	0	0.5	0	94	62.4-115	0			

LCSD		Sample ID: LCSD-28766-28766			Units: µg/sample		Analysis Date: 6/8/2015			
Client ID:		Run ID: GC3_150608A			SeqNo: 1068894		Prep Date: 6/8/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	8.965	1.0	10	0	89.6	67.5-137	8.502	5.3	15	
Surr: Decachlorobiphenyl	0.379	0	0.5	0	75.8	52.7-131	0.353	7.1	15	
Surr: Tetrachloro-m-xylene	0.463	0	0.5	0	92.6	62.4-115	0.47	1.5	15	

The following samples were analyzed in this batch:

1506177-01A	1506177-02A	1506177-03A
1506177-04A	1506177-05A	1506177-06A
1506177-07A	1506177-08A	1506177-09A
1506177-10A	1506177-11A	1506177-12A
1506177-13A	1506177-14A	1506177-15A
1506177-16A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Health and Engineering, Inc.
Work Order: 1506177
Project: 19965

QC BATCH REPORT

Batch ID: **28775** Instrument ID **GC3** Method: **SW8082**

MBLK		Sample ID: MBLK-28775-28775				Units: µg/sample		Analysis Date: 6/9/2015 09:35 PM		
Client ID:		Run ID: GC3_150609B				SeqNo: 1070019		Prep Date: 6/8/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	1.0								
Aroclor 1221	ND	1.0								
Aroclor 1232	ND	1.0								
Aroclor 1242	ND	1.0								
Aroclor 1248	ND	1.0								
Aroclor 1254	ND	1.0								
Aroclor 1260	ND	1.0								
Surr: Decachlorobiphenyl	0.379	0	0.5	0	75.8	52.7-131	0			
Surr: Tetrachloro-m-xylene	0.463	0	0.5	0	92.6	62.4-115	0			

LCS		Sample ID: LCS-28775-28775				Units: µg/sample		Analysis Date: 6/9/2015 11:51 PM		
Client ID:		Run ID: GC3_150609B				SeqNo: 1070028		Prep Date: 6/8/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	9.054	1.0	10	0	90.5	67.5-137	0			
Surr: Decachlorobiphenyl	0.379	0	0.5	0	75.8	52.7-131	0			
Surr: Tetrachloro-m-xylene	0.47	0	0.5	0	94	62.4-115	0			

LCS		Sample ID: LCSD-28775-28775				Units: µg/sample		Analysis Date: 6/10/2015 12:07 AM		
Client ID:		Run ID: GC3_150609B				SeqNo: 1070029		Prep Date: 6/8/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1260	9.207	1.0	10	0	92.1	67.5-137	0			
Surr: Decachlorobiphenyl	0.382	0	0.5	0	76.4	52.7-131	0			
Surr: Tetrachloro-m-xylene	0.453	0	0.5	0	90.6	62.4-115	0			

The following samples were analyzed in this batch:

1506177-17A	1506177-18A	1506177-19A
1506177-20A	1506177-21A	1506177-22A
1506177-23A	1506177-24A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 12-Jun-15

Client: Environmental Health and Engineering, Inc.
Project: 19965
WorkOrder: 1506177

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **EHE-NEEDHAM**

Date/Time Received: **05-Jun-15 09:23**

Work Order: **1506177**

Received by: **SNH**

Checklist completed by **Stephanie Harrington**

05-Jun-15

Reviewed by: **Chris Gibson**

12-Jun-15

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **Client**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<input type="text"/>		
Cooler(s)/Kit(s):	<input type="text"/>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<input type="text"/>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: